

Canada Inland waters branch

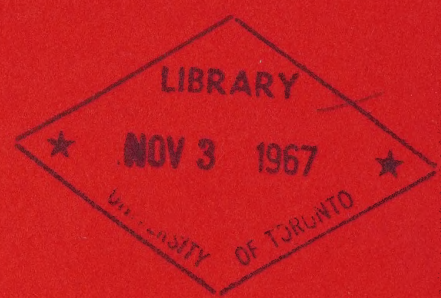
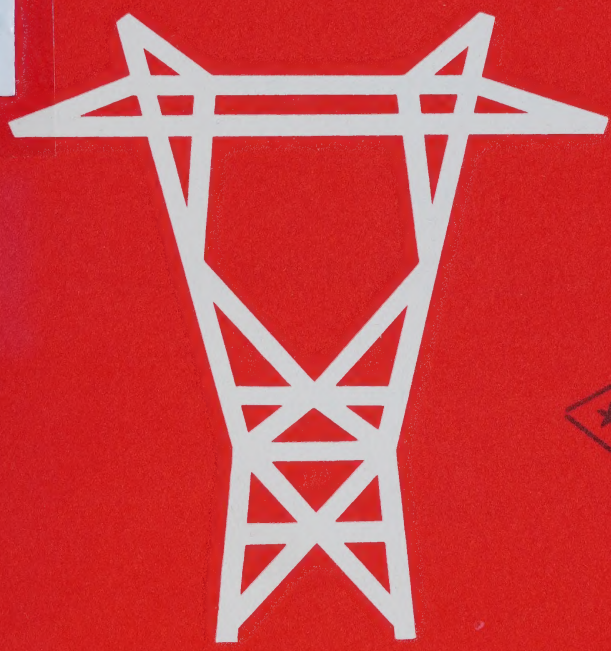
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ELECTRIC POWER IN CANADA

MAP SUPPLEMENT • ONTARIO

NOTE

Effective January 1, 1966, the Water Resources Branch was transferred from the Department of Northern Affairs and National Resources to the Department of Mines and Technical Surveys, pending the establishment by Parliament of the proposed new Department of Energy and Resources.



TRANSMISSION AND GENERATING FACILITIES

Ontario

DEPARTMENT OF MINES AND TECHNICAL SURVEYS
WATER RESOURCES BRANCH



TRANSMISSION AND GENERATING FACILITIES

Ottawa

DEPARTMENT OF MINES AND TECHNICAL SURVEYS

ROGER DUHAMEL, F.R.S.C.
Queen's Printer and Controller of Stationery
Ottawa, 1966

HYDRO

No.	Development	River	Owner	Year Installed		Rated Head ft.	No. of Units	Turbines		Generators	
				First Unit	Latest Unit			Unit Capacity hp.	Total Capacity hp.	Unit Capacity kw.	Total Capacity kw.
1	Sir Adam Beck-Niagara: Generating Station No. 1	Niagara	HEPCO	1922	1930	305 294 294 294	5 2 1 2	55,000 58,000 58,000 58,000		36,000 43,200 44,000 46,750	
	Generating Station No. 2			1954	1958	292	16	105,000	1,680,000	76,475	1,223,600
	Pumping-Generating Station			1957	1958	85	6	46,000	276,000	29,450	176,700
2	Robert H. Saunders - St. Lawrence	St. Lawrence	HEPCO	1958	1959	81	16	75,000	1,200,000	57,000	912,000
3	Des Joachims	Ottawa	HEPCO	1950	1951	130	8	62,000	496,000	45,000	360,000
4	Abitibi Canyon	Abitibi	HEPCO	1933	1959	237	4 1	66,000 66,000	330,000	41,225 43,200	208,100
5	Otto Holden	Ottawa	HEPCO	1952	1953	77	4 4	35,000 33,000	272,000	25,650 25,650	205,200
6	Otter Rapids	Abitibi	HEPCO	1961	1963	107	4	60,000	240,000	43,700	174,800
7	Ontario Power	Niagara	HEPCO	1905	1919	-	3 4 7 1	11,700 11,700 13,400 20,000	195,700	7,500 8,770 8,775 13,500	132,505
8	Harmon	Mattagami	HEPCO	1965	1965	-	2	94,000	188,000	64,600	129,200
9	Pine Portage	Nipigon	HEPCO	1950	1954	105	2 2	41,000 45,000	172,000	29,700 34,650	128,700
10	Chenau	Ottawa	HEPCO	1950	1951	40	8	21,000	168,000	15,300	122,400
11	Little Long	Mattagami	HEPCO	1963	1963	90	2	84,000	168,000	60,800	121,600
12	DeCew Falls No. 2	Welland Canal	HEPCO	1943	1947	280	2	75,000	150,000	57,600	115,200
13	Rankine	Niagara	CNPC	1904	1924	133	5 2 3 1	10,250 12,500 10,750 12,000	120,500	7,500 9,375 9,375 10,300	94,675
14	Toronto Power	Niagara	HEPCO	1906	1915	-	7 4	15,000 13,000	157,000	9,000 7,200	91,800
15	Chats Falls	Ottawa	HEPCO	1931	1931	53	4	28,000	112,000	22,325	89,300
16	Caribou Falls	English	HEPCO	1958	1958	58	3	34,000	102,000	25,650	76,950
17	Cameron Falls	Nipigon	HEPCO	1920	1958	72 72 73	2 4 1	12,500 12,500 25,000	100,000	9,540 8,480 19,000	72,000
18	Manitou Falls	English	HEPCO	1956	1958	54	5	18,500	92,500	14,400	72,000
19	Alexander	Nipigon	HEPCO	1930	1958	60 58	3 2	18,000 19,000	92,000	12,750 13,500	65,250
20	Whitedog Falls	Winnipeg	HEPCO	1958	1958	50	3	27,000	81,000	21,600	64,800
21	Stewartville	Madawaska	HEPCO	1948	1948	148	3	28,000	84,000	20,400	61,200
22	Smoky Falls	Mattagami	SFPPC	1928	1931	-	4	18,750	75,000	13,200	52,800
23	Silver Falls	Kaministiquia	HEPCO	1959	-	330	1	60,000	60,000	45,000	45,000
24	Geo. W. Rayner	Mississagi	HEPCO	1950	1950	210	2	29,000	58,000	21,150	42,300

Ontario

No.	Development	River	Owner	Year Installed		Rated Head ft.	No. of Units	Turbines		Generators	
				First Unit	Latest Unit			Unit Capacity hp.	Total Capacity hp.	Unit Capacity kw.	Total Capacity kw.
25	Barrett Chute	Madawaska	HEPCO	1942	1942	150	2	28,000	56,000	20,400	40,800
26	Upper Falls	Montreal	GLPC	1937	1957	232	2	12,600		9,000	
							1	31,000	56,200	22,500	40,500
27	Aguasabon	Aguasabon	HEPCO	1948	1948	290	2	27,500	55,000	20,250	40,500
28	Red Rock Falls	Mississagi	HEPCO	1960	1961	93	2	26,500	53,000	20,250	40,500
29	Island Falls	Abitibi	APPC	1924	1925	65	4	12,000	48,000	9,600	38,400
30	DeCew Falls No. 1	Welland Canal	HEPCO	1901	1913	-	1	3,000		2,500	
							2	3,000		2,000	
							1	6,000		4,800	
							1	6,000		5,000	
							2	6,000		5,300	
							1	6,000		5,600	
							1	6,000	45,000	5,900	38,400
31	Kakabeka Falls	Kaministiquia	HEPCO	1906	1914	178	3	7,500		5,400	
							1	12,500	35,000	7,970	24,170
32	High Falls	Michipicoten	GLPC	1930	1950	147	2	11,000		6,750	
							1	13,200	35,200	9,675	23,175
33	Big Eddy	Spanish	HCL	1929	1929	90	3	9,400	28,200	7,200	21,600
34	Sault Ste. Marie	St. Mary	GLPC	1918	1931	18.5	24	900		650	
							3	2,400		1,440	
							1	2,200	31,000	1,600	21,520
35	Iroquois Falls	Abitibi Lake & Black River	APPC	1949	1949	43	1	1,800		1,200	
							1	1,800		1,280	
							1	2,200		1,200	
							6	2,200		1,280	
							5	2,500	31,500	2,025	21,485
36	Twin Falls	Abitibi	APPC	1921	1925	57.5	5	6,000	30,000	4,050	20,250
37	Gartshore Falls	Montreal	GLPC	1958	-	112	1	30,300	30,300	20,000	20,000
38	Hollingsworth Falls	Michipicoten	GLPC	1959	-	108	1	30,300	30,300	20,000	20,000
39	Ear Falls	English	HEPCO	1930	1948	36	1	5,000		4,000	
							1	5,000		3,825	
							2	7,500	25,000	5,400	18,625
40	Norman	Winnipeg (West Branch)	OMPP	1925	1925	20	5	3,400	17,000	3,300	16,500
41	Lower Falls	Montreal	GLPC	1938	1941	185	2	10,900	21,800	8,100	16,200
42	Hogg	Montreal	GLPC	1964	-	78	1	21,750	21,750	15,000	15,000
43	Espanola	Spanish	KVPC	1906	1946	64	4	1,675		1,250	
							1	10,000		7,500	
							1	2,350	19,050	1,750	14,250
44	Scott Falls	Michipicoten	GLPC	1952	1952	70	2	10,000	20,000	6,800	13,600
45	High Falls	Spanish	HCL	1905	1918	85	4	3,550		2,000	
							1	7,500	21,700	5,550	13,550
46	Fort Frances	Rainy	OMPP	1955	1955	28	8	2,000	16,000	1,600	12,800
47	Thorold	Welland Canal	STLSA	1932	1932	160	3	5,000	15,000	4,000	12,000
48	Wawaitin	Mattagami	HEPCO	1912	1918	125	2	3,450		2,500	
							2	4,000	14,900	3,375	11,750
49	Kenora	Winnipeg	OMPP	1923	1924	20	4	1,200		1,000	
							6	1,200	12,000	1,250	11,500

ONTARIO (Cont'd)

HYDRO

No.	Development	River	Owner	Year Installed		Rated Head ft.	No. of Units	Turbines		Generators	
				First Unit	Latest Unit			Unit Capacity hp.	Total Capacity hp.	Unit Capacity kw.	Total Capacity kw.
50	Heely Falls	Trent	HEPCO	1913	1919	73	2	5,600		3,750	
							1	5,600	16,800	3,000	10,500
51	McPhail Falls	Michipicoten	GLPC	1954	1954	48	2	7,500	15,000	5,000	10,000
52	Upper Notch	Montreal	HEPCO	1930	1930	48	2	6,500	13,000	4,800	9,600
53	Calm Lake	Seine	OMPP	1928	1928	82	2	6,500	13,000	4,675	9,350
54	Sturgeon Falls	Sturgeon	APPC	1902	1964	40.5	1	2,500		1,800	
							1	1,000		1,685	
							1	1,500		1,350	
							1	1,500		1,685	
							1	1,500		1,415	
							1	1,000	9,000	1,415	9,350
55	Eddy	Ottawa	EBEC	1909	1912	38	2	4,650		3,000	
							1	4,650	13,950	3,320	9,320
56	Crystal Falls	Sturgeon	HEPCO	1921	1921	33	4	2,600	10,400	2,020	8,080
57	Ranney Falls	Trent	HEPCO	1922	1926	-	1	1,000		720	
							2	5,000	11,000	3,600	7,920
58	Chaudière Falls No. 4	Ottawa	OHEC	1931	1931	38	2	5,400	10,800	3,960	7,920
59	Big Eddy	Muskoka	HEPCO	1941	1941	38	2	5,280	10,560	3,825	7,650
60	Ragged Rapids	Muskoka	HEPCO	1938	1938	38	2	5,200	10,400	3,825	7,650
61	Sturgeon Falls	Seine	OMPP	1927	1927	62	2	5,000	10,000	3,825	7,650
62	Matabitchuan	Matabitchuan	HEPCO	1910	1910	305	4	3,300	13,200	1,690	6,760
63	Lower Sturgeon	Mattagami	HEPCO	1923	1923	42	2	4,000	8,000	3,200	6,400
64	Smooth Rock Falls	Mattagami	APPC	1916	1916	45	2	4,500	9,000	2,800	5,600
65	Nairn	Spanish	HCL	1917	1917	30	2	2,000		1,500	
							1	2,600	6,600	1,875	4,875
66	Eugenia	Beaver	HEPCO	1915	1920	550	2	2,250		1,200	
							1	4,000	8,500	2,400	4,800
67	Meyerburg (Dam 8)	Trent	HEPCO	1924	1924	32	3	2,200	6,600	1,600	4,800
68	Chaudière Falls No. 2	Ottawa	OHEC	1909	1936	40	3	2,300	6,900	1,462	4,386
69	Peterborough	Otonabee	PHPC	1902	1950	27	1	2,300		1,200	
							1	2,550		1,500	
							1	2,140	6,990	1,400	4,100
70	Coniston	Wanapitei	HEPCO	1905	1915	53	1	1,200		720	
							1	1,600		1,125	
							1	3,500	6,300	2,250	4,095
71	Stinson	Wanapitei	HEPCO	1925	1925	-	2	3,500	7,000	2,000	4,000
72	Calabogie	Madawaska	HEPCO	1917	1917	30	2	3,000	6,000	2,000	4,000
73	Big Chute	Severn	HEPCO	1911	1919	56	3	1,300		900	
							1	2,300	6,200	1,280	3,980
74	South Falls	South Muskoka	HEPCO	1916	1925	107	1	1,000		635	
							2	2,200	5,400	1,600	3,835

ONTARIO (Cont'd)

HYDRO

No.	Development	River	Owner	Year Installed		Rated Head ft.	No. of Units	Turbines		Generators	
				First Unit	Latest Unit			Unit Capacity hp.	Total Capacity hp.	Unit Capacity kw.	Total Capacity kw.

ONTARIO (Cont'd)

75	Wabagishik	Vermilion	HCL	1912	1935	70	1	2,700		1,500	
							1	2,700	5,400	2,140	3,640
76	Swift Rapids	Severn	OWLP	1917	1917	47	3	2,120	6,360	1,200	3,600
77	Minden	Gull	OWLP	1935	1935	70	2	2,600	5,200	1,800	3,600
78	Sandy Falls	Mattagami	HEPCO	1911	1916	32	2	1,200		950	
						34	1	2,500	4,900	1,595	3,495
79	Hagues Reach	Trent	HEPCO	1925	1925	22.5	3	1,600	4,800	1,120	3,360
80	Indian Chute	Montreal	HEPCO	1923	1924	45	2	2,250	4,500	1,620	3,240
81	Sidney	Trent	HEPCO	1911	1911	20	4	1,400	5,600	795	3,180
82	Seymour	Trent	HEPCO	1909	1911	23	4	1,100		600	
						1		1,100	5,500	750	3,150
83	Mathias	Muskoka	OWLP	1950	-	47	1	3,770	3,770	2,812	2,812
84	Hound Chute	Montreal	HEPCO	1910	1911	-	4	1,335	5,340	700	2,800
85	Kapuskasing	Kapuskasing	SFPPC	1923	-	30	1	2,500	2,500	2,750	2,750
86	Frankford	Trent	HEPCO	1913	1913	18	4	1,200	4,800	650	2,600
87	Jones Falls	Rideau Canal	GELW	1948	1950	65	1	250		180	
						58	2	1,037		800	
						58	1	1,500	3,824	800	2,580
88	Nassau	Otonabee	CGEC	1902	1926	16	1	2,000		1,500	
						2		700	3,400	480	2,460
89	McVittie	Wanapitei	HEPCO	1912	1912	42	2	1,800	3,600	1,125	2,250
90	High Falls	Mississippi	HEPCO	1920	1920	82	3	1,240	3,720	700	2,100
91	Nipissing	South	HEPCO	1909	1909	-	1	1,250		1,000	
						1		1,250	2,500	1,050	2,050
92	Lakefield	Otonabee	HEPCO	1928	-	16	1	3,100	3,100	2,000	2,000
93	Fountain Falls	Montreal	HEPCO	1914	1914	30	2	1,500	3,000	1,000	2,000
94	Rideau Falls	Rideau	NRC	1909	1909	47	2	1,500	3,000	1,000	2,000
95	Sills Island	Trent	HEPCO	1926	1926	14	1	1,000		960	
						1		1,000	2,000	1,020	1,980
96	Crow Bay	Trent Canal	CPUC	1909	1911	-	1	1,470		1,125	
						1		1,000	2,470	850	1,975
97	Auburn	Otonabee	HEPCO	1911	1912	18	3	950	2,850	625	1,875
98	Current River	Current	PAPUC	1902	1906	80	2	450		350	
						1		1,200	2,100	1,150	1,850
99	Eagle	Eagle	DPC	1928	-	37	1	2,000	2,000	1,760	1,760
100	Trethewey Falls	South Muskoka	HEPCO	1929	-	35	1	2,300	2,300	1,600	1,600

Total capacity of plants under 1,500 kw.

29,826

21,858


Total capacity of turbines connected directly to mechanical equipment

27,375

Total (all plants)

8,399,935

6,064,241



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THERMAL

THERMAL

No.	Station	Location	Owner	Year Installed		Fuel	Type of Prime Mover	Generators		
				First Unit	Latest Unit			No.	Unit Capacity kw.	Total Capacity kw.

Ontario

1	Richard L. Hearn	Toronto	HEPCO	1951	1961	Coal	S	4 4	100,000 200,000	1,200,000
2	Lakeview	Toronto	HEPCO	1961	1965	Coal	S	4	300,000	1,200,000
3	J. Clark Keith	Windsor	HEPCO	1951	1953	Coal	S	4	66,000	264,000
4	Thunder Bay	Fort William	HEPCO	1963	-	Coal	S	1	100,000	100,000
5	Windsor	Windsor	FMCC	1936	1952	Coal	S	1 1 2	10,000 4,000 25,000	64,000
6	A. W. Manby	Toronto	HEPCO	1965	1965	Oil	GT	2	16,320	32,640
7	Sarnia	Sarnia	PC	1943	1956	Coal, oil	S	1 1 1 1	10,000 5,000 4,000 13,280	32,280
8	Sarnia-Scott	Sarnia	HEPCO	1965	1965	Oil	GT	2	15,000	30,000
9	Fort William	Fort William	GLPC	1928		Gas, coal, wood- waste	S	1 1 1	4,000 5,000 17,100	26,100
10	Sault Ste. Marie	Sault Ste. Marie	ASC	1942	1963	Gas, oil, coal	S	2 2	12,500 500	26,000
11	Kapuskasing	Kapuskasing	SFPPC	1928	1958	Coal, gas, wood- waste	S	2 1 1	650 12,500 9,100	22,900
12	Nuclear Power De- monstration Unit	Rolphton	AECL	1962	-	Uranium dioxide	S	1	20,000	20,000
13	Marathon	Marathon	MCC	1946	1948	Coal, oil	S	1 2	7,500 4,000	15,500
14	Hamilton	Hamilton	SCC	1948	1959	Coke- oven gas, oil	S	1 1	4,000 6,000	10,000
15	Amherstburg	Amherstburg	BRMC	1938	1957	Coal	S	1 1 1	2,500 2,000 3,750	8,250
16	Thorold	Thorold	OPC	1937	1937	Coal, gas	S	2	4,000	8,000

THERMAL

No.	Station	Location	Owner	Year Installed		Fuel	Type of Prime Mover	Generators		
				First Unit	Latest Unit			No.	Unit Capacity kw.	Total Capacity kw.

ONTARIO (Cont'd)

17	Dryden	Dryden	DPC	1954	-	Coal, gas	S	1	6,000	6,000
18	Walkerville	Walkerville	HWS	1924	1955	Coal	S	2 1 1	1,000 2,500 625	5,125
19	Sault Ste. Marie	Sault Ste. Marie	APPC	1927	-	Coal, gas, wood-waste	S	1	3,500	3,500
20	Strathcona	Strathcona	SP	1955	1955	Coal	S	2	1,655	3,310
21	Chatham	Chatham	CDSC	1946	1946	Coal	S	2	1,500	3,000
22	Fort Frances	Fort Frances	OMPP	1927	-	Coal	S	1	3,000	3,000
23	Blind River	Blind River	MFLC	1927	1927	Wood-waste	S	1 1	750 2,000	2,750
24	Station No. 6	Gananoque	GELW	1959	1959	Gas	IC	2	1,360	2,720
25	Toronto	Toronto	CDSC	1959	-	Coal, gas, oil	S	1	2,500	2,500
26	Toronto	Toronto	CCCC	1937	-	Coal, oil	S	1	2,500	2,500
27	Ottawa	Ottawa	EBEC	1923	-	Coal	S	1	2,500	2,500
28	Port Arthur	Port Arthur	APPC	1928	-	Coal, wood-waste, gas	S	1	2,500	2,500
29	New Toronto	New Toronto	GTR	1940	-	Coal, oil	S	1	2,500	2,500
30	Pembroke	Pembroke	PELC	1929	1949	Oil	IC	1 2	933 680	2,293
31	Orillia	Orillia	OWLP	1947	1948	Oil	IC	1 1	1,000 1,136	2,136
32	Peterborough	Peterborough	CGEC	1930	1949	Coal	S	1	2,000	2,000
33	Espanola	Espanola	KVPC	1947	1951	Coal	S	1	2,000	2,000

Total capacity of plants 1,500 kw. and over (not listed above) 94,450

Total capacity of plants under 1,500 kw. 12,840

Total (all plants) 3,217,294

GT - Gas Turbine, IC - Internal Combustion, S - Steam

OWNER CODE INDEX

CODE	OWNER
AECL.	Atomic Energy of Canada Limited
APPC.	Abitibi Power and Paper Company Limited
ASC.	Algoma Steel Corporation Limited
BRMC.	Brunner Mond Canada Limited
CCCC.	Continental Can Company of Canada Limited
CDSC.	Canada and Dominion Sugar Company Limited
CGEC.	Canadian General Electric Company Limited
CNPC.	Canadian Niagara Power Company Limited
CPUC.	Campbellford Public Utilities Commission
DPC.	Dryden Paper Company Limited
EBEC.	E. B. Eddy Company
FMCC.	Ford Motor Company of Canada Limited
GELW.	Gananoque Electric Light and Water Supply Co. Ltd.
GLPC.	Great Lakes Power Corporation Limited
GTR.	Goodyear Tire and Rubber Company Limited
HCL.	Huronian Company Limited
HEPCO.	Hydro-Electric Power Commission of Ontario
HWS.	Hiram Walker and Sons Limited
KVPC.	Kalamazoo Vegetable Parchment Company Limited
MCC.	Marathon Corporation of Canada
MFLC.	McFadden Lumber Co. (Domtar)
NRC.	National Research Council, Government of Canada
OHEC.	Ottawa Hydro-Electric Commission
OMPP.	Ontario-Minnesota Pulp and Paper Company Limited
OPC.	Ontario Paper Company
OWLP.	Orillia Water Light and Power Commission
PAPUC.	Port Arthur Public Utilities Commission
PC.	Polymer Corporation
PELC.	Pembroke Electric Light Company Limited
PHPC.	Peterborough Hydraulic Power Company
SCC.	Steel Company of Canada Limited
SFPPC.	Spruce Falls Power and Paper Company
SP.	Strathcona Paper Company Limited
STLSA.	St. Lawrence Seaway Authority



